Docket No.:   RIC00019   Appln No.:   09/768,070

Title Intelligent network and Method for Providing Voice Telephony over ATM
and Alias Addressing
Inventor(s):   John K. Gallant

Sheets of Drawings: ___1___ of ___7___

1/7

FIG. 1

Docket No.: RIC00019   Appln No.: 09/768,070

Title. Intelligent network and Method for Providing Voice Telephony over ATM
and Alias Addressing
Inventor(s):   John K. Gallant

Sheets of Drawings.   2   of   7

2/7

FIG. 2

Docket No.:   RIC00019   Appln No :   09/768,070

Title: Intelligent network and Method for Providing Voice Telephony over ATM
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Inventor(s):   John K Gallant
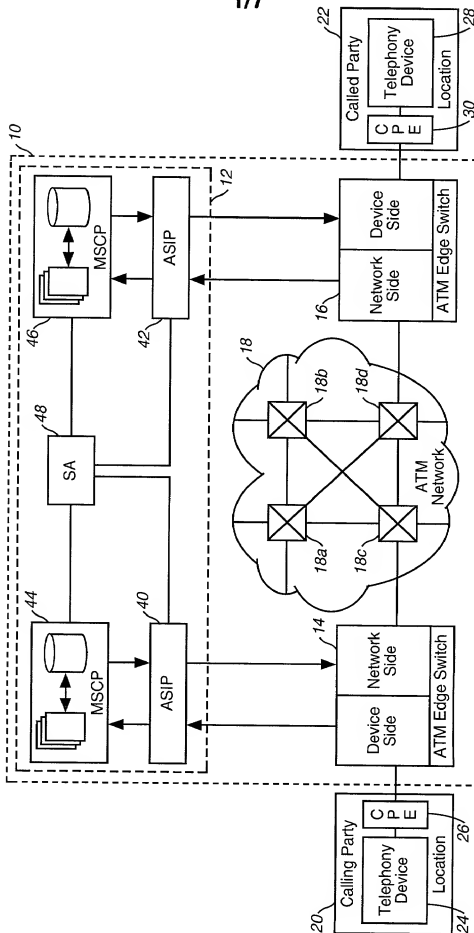
Sheets of Drawings.   3   of   7

3/7

FIG. 3

FIG. 4

Docket No.: RIC00019   Appln No.: 09/768,070

Title. Intelligent network and Method for Providing Voice Telephony over ATM
and Alias Addressing
Inventor(s)·   John K. Gallant

Sheets of Drawings: 4   of   7

4/7

FIG. 5

Docket No.:   RIC00019   Appln No.:   09/768,070

Title: Intelligent network and Method for Providing Voice Telephony over ATM
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Inventor(s).   John K Gallant
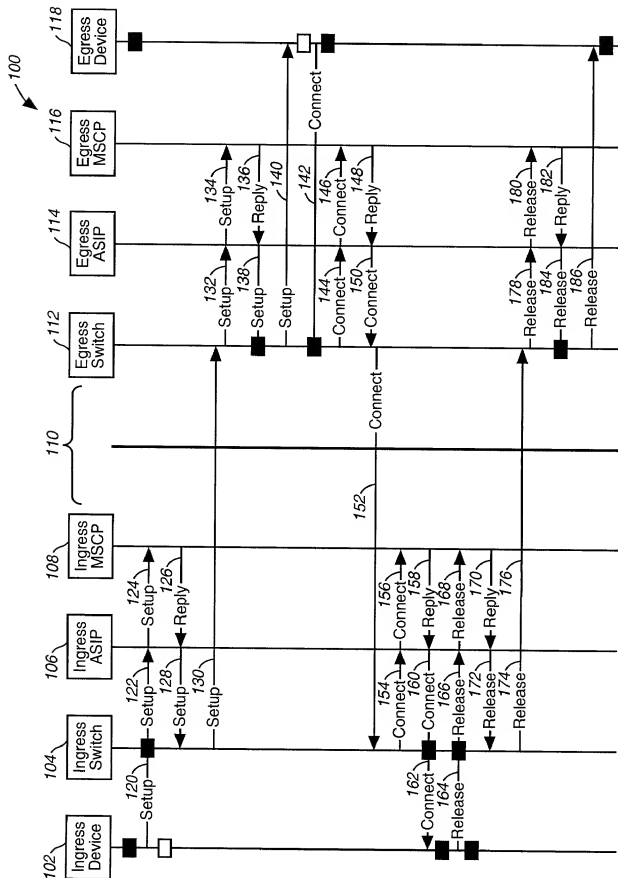
Sheets of Drawings   5   of   7

5/7

```
                                                         ┌─600
                                                         ▼

                              ┌─────────────┐  ┌602
                              (    Start     )
                              └─────────────┘
                                     │                      ┌604
              ┌──────────────────────┴──────────────────────┐
              │   Intercept Input ATM Setup Message From     │
              │           Ingress ATM Edge Switch            │
              └──────────────────────┬──────────────────────┘
                                     │                      ┌606
              ┌──────────────────────┴──────────────────────┐
              │  Extract Information From Input ATM Setup Message  │
              └──────────────────────┬──────────────────────┘
                                     │                      ┌608
              ┌──────────────────────┴──────────────────────┐
              │  Analyze Information To Determine If Input ATM Setup │
              │  Message Is A Request To Set Up An SVC For VTOA     │
              └──────────────────────┬──────────────────────┘
                                     │                      ┌610
              ┌──────────────────────┴──────────────────────┐
              │  Generate Alias ATM Address Of Called Party CPE That │
              │  Corresponds To A Network Gateway In Communication  │
              │   With A PSTN Switch Through A Plurality Of Trunk   │
              │          Lines And A Designated Trunk Line          │
              └──────────────────────┬──────────────────────┘
                                     │                      ┌612
              ┌──────────────────────┴──────────────────────┐
              │   Generate Output ATM Setup Message That Includes  │
              │     Alias ATM Address Of The Called Party CPE That │
              │ Corresponds To Network Gateway And Designated Trunk Line │
              └──────────────────────┬──────────────────────┘
                                     │                      ┌614
              ┌──────────────────────┴──────────────────────┐
              │     Communicate Output ATM Setup Message To   │
              │     Ingress ATM Edge Switch Of The ATM Network │
              └──────────────────────┬──────────────────────┘
                                     │                      ┌616
                              ┌─────────────┐
                              (     End      )
                              └─────────────┘
```

FIG. 6

Docket No.: RIC00019   Appln No.: 09/768,070

Title: Intelligent network and Method for Providing Voice Telephony over ATM
and Alias Addressing
Inventor(s)   John K Gallant
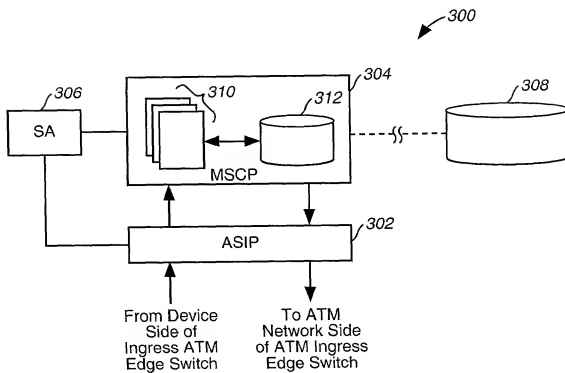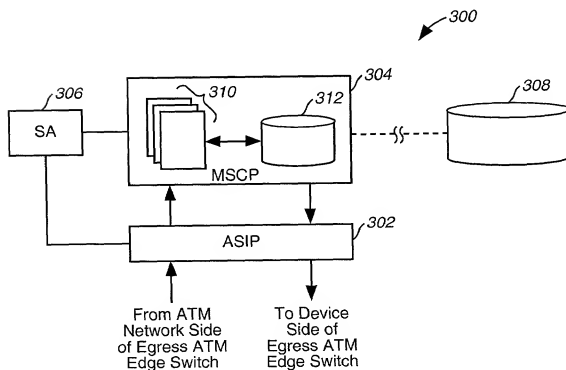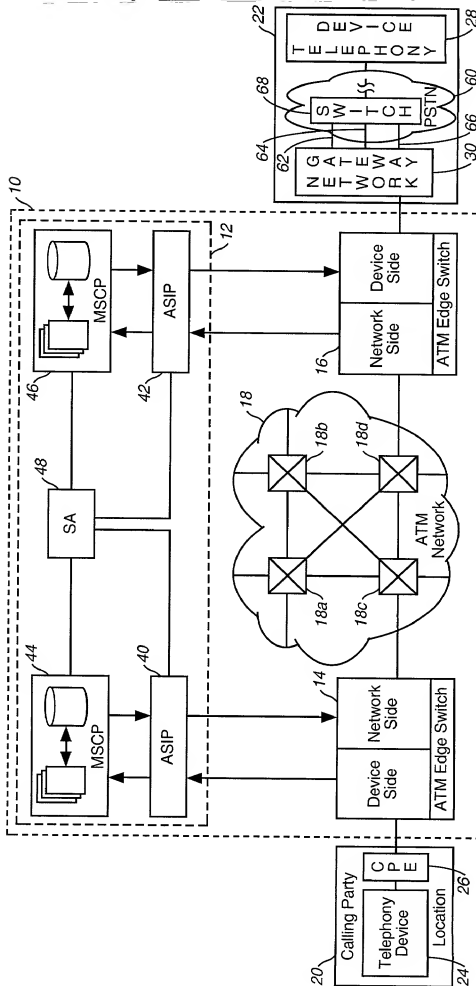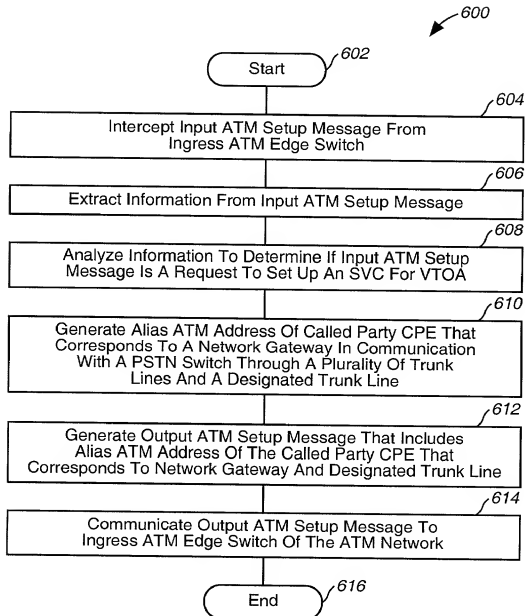
Sheets of Drawings·   6   of   7

6/7

```
                                              ┌─ 700
                                           ┌──┘
                                 ┌──────────┐ ┌─ 702
                                 (  Start   )─┘
                                 └──────────┘
                                       │                    ┌ 704
        ┌──────────────────────────────────────────────────┐
        │      Receive Request At Ingress CPE To Make VTOA Call      │
        │      That Includes A Called Party Phone Number Value       │
        └──────────────────────────────────────────────────┘
                                       │                    ┌ 706
    ┌──────────────────────────────────────────────────────┐
    │     Generate Input ATM Setup Message At CPE That Includes     │
    │ Called Party Phone Number And VTOA Designator Stored In Designated │
    │          Parameters Of Input ATM Setup Message           │
    └──────────────────────────────────────────────────────┘
                                       │                    ┌ 708
    ┌──────────────────────────────────────────────────────┐
    │  Receive The Input ATM Setup Message At Ingress ATM Edge Switch  │
    └──────────────────────────────────────────────────────┘
                                       │                    ┌ 710
    ┌──────────────────────────────────────────────────────┐
    │   Intercept Input ATM Setup Message From Ingress ATM Edge Switch  │
    └──────────────────────────────────────────────────────┘
                                       │                    ┌ 712
    ┌──────────────────────────────────────────────────────┐
    │      Extract Information From The Input ATM Setup Message That    │
    │      Includes VTOA Designator And Called Party Phone Number       │
    └──────────────────────────────────────────────────────┘
                                       │                    ┌ 714
    ┌──────────────────────────────────────────────────────┐
    │   Analyze Information To Determine If VTOA Designator Is Present   │
    └──────────────────────────────────────────────────────┘
                                       │                    ┌ 716
    ┌──────────────────────────────────────────────────────┐
    │       Generate Alias ATM Address Of Called Party CPE That        │
    │  Corresponds To A Network Gateway In Communication With A PSTN    │
    │     Switch Through A Plurality Of Trunk Lines And A Designated    │
    │          Trunk Line Using The Called Party Phone Number           │
    └──────────────────────────────────────────────────────┘
                                       │                    ┌ 718
    ┌──────────────────────────────────────────────────────┐
    │    Generate Output ATM Setup Message That Includes Alias ATM      │
    │   Address Of The Called Party CPE That Corresponds To Network     │
    │ Gateway And Designated Trunk Line, And Called Party Phone Number  │
    └──────────────────────────────────────────────────────┘
                                       │                    ┌ 720
    ┌──────────────────────────────────────────────────────┐
    │            Communicate Output ATM Setup Message To               │
    │         Ingress ATM Edge Switch Of The ATM Network               │
    └──────────────────────────────────────────────────────┘
                                       │
                                     ( A )
```

FIG. 7A

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Inventor(s).   John K Gallant
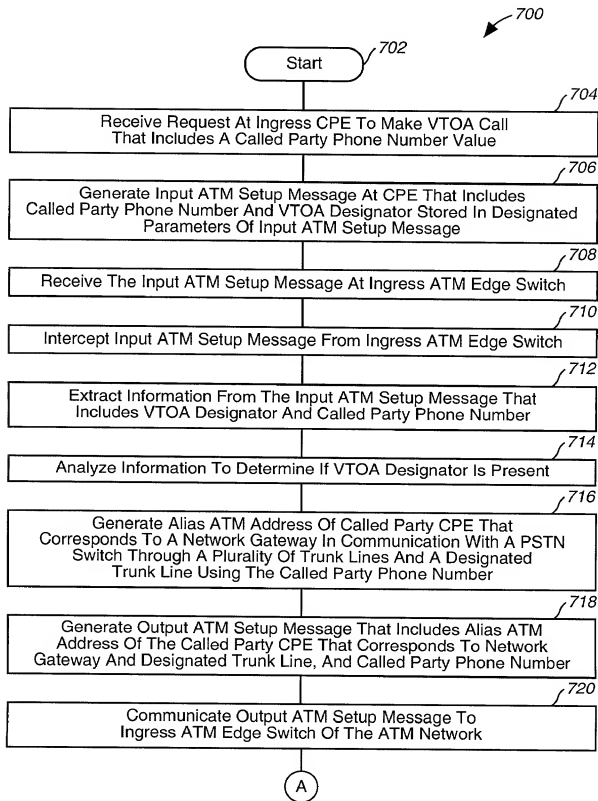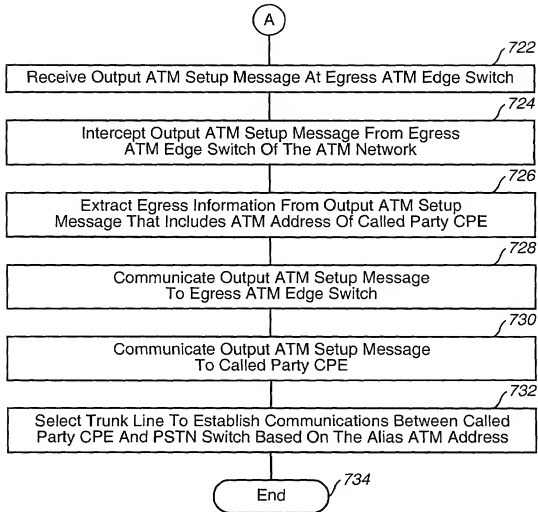
Sheets of Drawings.   7   of   7

7/7

(A)

| 722
Receive Output ATM Setup Message At Egress ATM Edge Switch

| 724
Intercept Output ATM Setup Message From Egress
ATM Edge Switch Of The ATM Network

| 726
Extract Egress Information From Output ATM Setup
Message That Includes ATM Address Of Called Party CPE

| 728
Communicate Output ATM Setup Message
To Egress ATM Edge Switch

| 730
Communicate Output ATM Setup Message
To Called Party CPE

| 732
Select Trunk Line To Establish Communications Between Called
Party CPE And PSTN Switch Based On The Alias ATM Address

| 734
(End)

FIG. 7B